THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

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April 2001

Welcome to the Real World

Here's the Other
One Percent

Plenty of Skippers, Not Much Fuel

approach

The Naval Safety Center's Aviation Magazine

April 2001 Volume 46 No. 04

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Here's the Other One Percent

by Lt. Matthew Cruse

We were in the middle of the best training I'd ever had: an air-wing SFARP with dedicated bandit support, live ordnance, and best of all, three weeks on a tropical Pacific island. We were anxious to take advantage of these one-of-a-kind resources in our limited amount of time. We had been in Guam about a week, just long enough for everyone to become a little too comfortable with the new surroundings.

The live ordnance area was the island of Farallon di Medina, n half-mile-long chunk of rock jutting out of the ocean. Every day, an air-wing flight schedule was written to sort out the various working areas, but Farallon was scheduled with overlaps in order to accommodate the number of aircraft that needed to drop live ordnance. To help deconflict,

Original Tomcat photo by Ltig. Stephen P. Davis

each area was given a shot-common frequency. Any aircrew entering the area was required to broadcast their intentions and then had to monitor the frequency to make sure they didn't interfere with other aircraft.

One morning, our division of Tomcats was briefing a 4 v X, self-escort strike, with each aircraft carrying two Mk-83 general-purpose bombs. We had two Hornets and a Lear jet with radar-jamming capabilities; along with our dedicated bandits, we were being controlled by an E-2C. After our individual crew briefs, we headed to the PR shop, suited up and ran to our jets.

Everything went as planned: four Tomcats airborne on time, en route the working area with live ordnance. We checked in with the E-2C on the area-common frequency, and then, followed by our bandits, we proceeded to the target area. It was their responsibility to act as range safety and to clear the target for our live-ordnance drops. The bandits completed their range-clearing run and were ready to play. Several minutes later, we reached our push point 50 miles from the target and started our strike.

Before we hit our first route point, the E-2C

began calling a factor group on our nose for 25 miles. It was the Lear jet, jamming us right at the start of our route. The AWG-9 quickly burned through, and we prosecuted the group without much

problem. The E-2C continued to paint a good picture, a single group capping over the target area, which turned into a two-group presentation in range, with the near group hot. Once again, we took care of the factor group and proceeded to the IP.

As we hit the IP, the E-2C was still calling a group capping in the target area. As the RIO in Dash 3, I began to think that the bandits were trying to test our target-area commit criteria; in other words, seeing if we were dumb enough to proceed with the bombing run with a hostile group at the target area. However, the bandits transmitted that there were no other bandits in the target area, and we were not painting any contacts over the target with our own radars. We assumed the E-2 had painted a "phantom" group, and after the

bandits called clear of the target, the E-2C gave no further calls.

We switched our weapons systems from airto-air to air-to-ground mode and proceeded to our target with our live Mk-83s. Our game plan was to deliver our ordnance from a 20,000-foot roll-in. with about five seconds separating each aircraft in the division. As we hit the roll-in point, the lead Tomcat began his run, followed by Dash 2, then my aircraft. I saw both Tomcats in the dive in front of us and then saw lead begin his pull-up, so I knew he had dropped his bombs. At that instant, something caught my eye: two Hornets just above the deck, 12,000 feet below us, making a run over the target area. I couldn't believe my eyes. What were those guys doing there?

I quickly keyed the mike and yelled. "Abort!" several times over the area-common frequency. Unfortunately, Dash 2 also had pickled before the abort call. I saw the explosions from the lead Tomcat's bombs just in front of the first Hornet, and, seconds later, Dash 2's bombs exploded just aft of the second Hornet. I could tell the Hornets were very low, and I thought for sure they had been fragged. As all four Tomcats pulled off target

At that instant, something caught my eye: two Hornets just above the deck, 12,000 feet below us, making a run over the target area.

> to rejoin, I saw that both Hornets were still flying-a huge relief.

After a few seconds, one of the Hornets came up over the common frequency and reiterated the fact that someone had just dropped live ordnance on them. I recognized the voice and knew immediately that it was the skipper of a Hornet squadron in my air wing. "Great," I thought, "we almost killed a skipper!" Later, we learned that the explosions were so close that the concussion shook their aircraft, but they were not fragged.

We decided that we'd had enough excitement for one morning and headed back to base. On the way home, I must have gone over the situation a thousand times in my head. "How did they get into the target area without us hearing them?" I wondered. We were all going through the same



thing in our heads, wondering how it had happened. and feeling overjoyed that no one was hurt.

Once on deck, the Tomcat division got together to try to figure out exactly what had happened. Somehow, we, the strikers and the bandits, had convinced ourselves that the E-2C was painting a "phantom" group in the target area. At the PR shop, we ran into the E-2C controller. who told us he knew positively that aircraft were in the target area because he was picking up their squawk. But he never said so over shot common, believing the contact was a bandit testing our target-area tactics.

A few minutes later, we were called into a meeting with the Hornet skipper whom we had almost killed 45 minutes earlier. Although I was nervous at first seeing him face to face, the discussion was very professional. It was clear everyone wanted to get to the root of the problem. We learned that shortly after the exercise started. the unlucky section of Hornets entered the area to recce the target and work section low-altitude tactics. They didn't know the target had been scheduled for another event. The Hornets were up on the area-common frequency for the target and actually heard all of our comms, but they thought we were in another working area. As far as they were concerned, the area was all theirs, and they switched to their tactical frequency in order to get rid of all the chatter on the area-common frequency.

The E-2C controller said he had watched this section come into the area and fly around the target area but thought they were part of the Bandit presentation. The Strikers never saw or heard these interlopers, and this fact led them to

believe the E-2C was painting a "phantom" group. Each player in this scenario held part of the blame. The section of Hornets should have checked in on the shot-common frequency and should have been suspicious when they heard all the comms on the common frequency. The strikers should have known something was wrong on the ingress, since we encountered a Lear jet in the first group, then two bandits in the second group. We knew from the brief that there were only three bandit aircraft. Finally, the E-2C should have been more assertive. especially since they were painting squawks on the two Hornets.

Several good learning points came out of this incident. First, a live bombing range should be scheduled as exclusive use only, not overlapped with several sections of aircraft that are not working or briefing together. Next, our CAG mandated that all aircraft operating in an assigned working area would be up a common frequency. not just to check in, but also to monitor. Also, the aircrew in any aircraft dropping live ordnance was required to make a call on guard prior to commencing the run. After recounting the events of what happened, it turned out that several people in the flight (including me) had had uneasy feelings prior to bombs coming off the airplanes. Any one of us could have knocked it off, figured out what was going on, then started over. On the other hand, how many times have aviators, especially in strike fighters, had uneasy feelings going into six-plane merge, or trying to identify a ground target? I've had this feeling countless times, and 99 percent of the time, everything worked out OK. Well, here was that other one percent.

Our focus on getting the "X." especially with the limited resources and time allotted to us, forced us to push the limit. I certainly have increased my level of awareness for those "something just doesn't feel right" moments, especially in multiplane scenarios. I also have increased my commitment to reduce that risk when able. Much of the risk we face is out of our hands. However, when something arises that we do have some control over, we have to step up and make that dreaded "knock it off" call before we pass the point of no return. widow

Lt. Cruse was a first tour RIO at VF-154 when he wrote this article. He now flies with VFA-122

But NATOPS Says...

Ted Carlson

by LCdr. Todd Squire

was the flight leader for a three-plane flyoff from Hill Air Force Base to NAS Whidbey
Island. The flight was the last leg of a translant that had started in Aviano, Italy, four days earlier.

We briefed in accordance with NATOPS, took off and joined up. About 160 miles out of Hill, my wingman told me he had a combined-hydraulic-system failure. I gave him the lead and joined on him for a visual inspection. As I got closer to the aircraft, I could see the keel of the aircraft was soaked with hydraulic fluid.

I have always briefed that the aircrew in the wing aircraft during an emergency would shut up and offer whatever assistance was requested. The lead aircraft had some decisions to make. We were in visual range of Mountain Home AFB, but it was closed for the Fourth of July holiday. The lead crew weighed their options and decided to return to Hill. We had just taken off from there, the weather was beautiful, and the gear was in battery.

We detached the third aircraft to return to Whidbey, while my wingman and I headed to Hill. I didn't think it would be a big deal: My wingman would blow down the gear and take a trap. It didn't quite turn out that way.

My wingman electrically lowered the flaps without incident. He slowed to 150 KIAS to actuate the emergency-gear blow-down system. The mainmounts came down perfectly, but the nose gear came down to a trail position. With more than 2,000 hours in the Prowler and 2,500 total

flight time, I had never seen this configuration before. My wingman reported that he had the mainmounts down and locked, but the nosegear was barber poled. Not having much else to say, I told him I had to agree with that analysis of the landing-gear indications.

Having dealt with two emergency checklists, our wingman had another to go through. He tried to yaw the aircraft, then apply positive and negative G I had never seen a piece of landing gear sway so much in the wind. It stayed in the trail position. We gave our wingman the opportunity to land first, knowing we would have to divert to Salt Lake International if the gear collapsed on landing. He decided that we should land first, since we had very little to offer him as a wingman. We landed, and he followed. Just as we expected, the nosegear collapsed on landing, but the arrestment was successful, and the aircraft stopped on centerline.

Mishap investigators found the blow-down system had been rigged improperly, and the nitrogen bottle that provides the pressure didn't fully actuate. I was interested to discover that the emergency blow-down system can be actuated a second time. NATOPS, as well as all the training I had received, told me this system was a one-time-use item—either it worked, or it didn't. The investigation revealed that most maintenance personnel knew the system could be actuated a second time if the nitrogen bottle did not completely discharge the first time.

LCdr Squire is an EA-6B pilot and the Ops O at VAO-138.

Deadly

by Ltjg. Matt Sheflin

his adventure takes place off the coast of Mexico. I was returning from another SSC mission that was part of the ongoing search for drug smugglers. As usual, we were working through another horizonless, dark-as-anything night. I felt prepared for standard mission tasking, but I wasn't prepared for what was about to happen. My "routine" landing after the mission was mere inches from becoming a Class A mishap.

I was the H2P (flying left seat), and the HAC was at the controls in the right seat. I had been flying the SH-60B for a year and had logged more than 150 hours in model. The HAC had more than 2,000 hours in model. He gave me the approach and landing back at the ship to update my currency. After I completed the landing checks, we swapped controls for one approach and two free deck bounces into the rapid-securing device.

We had come no more than a foot from striking the top of the superstructure...

Drift

Shortly after gaining visual contact with the ship, we were given a green deck and were cleared for landing. The approach was a bit hot and a little high on the perch but nothing too unusual for a no-horizon night. As we made our approach to the fantail, the Senso came on the ICS and reported a problem with the messenger cable. When he had lowered the RAST probe, the messenger cable had begun to pay out, and he couldn't retrieve it electrically. It was now dangling below the aircraft, with the end somewhere on the deck below. As we hovered over the deck, the Senso told us he was going to try to retrieve the messenger by hand, in order to prevent the cable from tangling in the nets.

As he began to manually haul in the cable, the LSO came up on the radio and informed us that the light on our RAST probe wasn't on, and he couldn't see the messenger cable. The HAC asked if I had remembered to turn on the RAST light. To my amazement, I discovered that I had missed it on the landing checklist.

As we hovered over the deck, the HAC called for a swap of the controls, so that I could reach the RAST light switch, which is located on the left side of the cockpit. After the HAC took the controls, I began to concentrate on the overhead console, fumbling for the switch. During small-deck RAST landings, the pilot who isn't at the controls is responsible for backing up the flying pilot by scanning the deck for fore and aft drift. Hash marks on the flight deck help the non-flying pilot do this. In addition, there is a second set of hash marks the Senso can use to help judge fore and aft alignment.

At this point, the Senso and I were distracted, and neither of us were concentrating on backing up the flying pilot. It didn't seem to take more than two seconds to look up to locate the switch and

then focus my attention outside, but it was more than long enough to begin a potentially disastrous drift toward the hangar. The only thing that I remember after looking back outside was seeing the top of the SPY radar antenna and the top portion of the hangar through the chin bubble. I told the HAC. "We need to come aft."

We had come no more than a foot from striking the top of the superstructure—too close for comfort. If we had actually struck the superstructure while hovering over the LSO shack, our loss of situational awareness might have killed not only the four people in the aircraft, but also those in the LSO shack and possibly a few in the hangar.

During the debrief, we determined that the HAC may have had vertigo but didn't recognize it until it was almost too late. He said that he had detected forward drift and had put in what he perceived as enough aft cyclic to correct the problem, but the drift had continued. By the time he made the second input, we had drifted to within a foot of disaster.

We had allowed a classic chain of events to develop unchecked. Our crew coordination and situational awareness had broken down, making the hazard of vertigo even more severe. We use ACT techniques when landing on a small boy, but in this case, a chain of events distracted the aircrew. The result was a loss of SA by the copilot and Senso that, when combined with the flying pilot's vertigo, nearly sealed the deal for us. Lack of attention to detail when completing the landing checklist was the first link in the mishap chain. Had the RAST light been on when we crossed the deck edge, I would not have been fumbling for the switch, and a swap of controls would not have been necessary.

Ltig. Sheflin flies with HSL-47, Det. 2

Welcome to the Real World

by Lt. Peter Ries

was flying a T-45, my second hop on a Key West det. After some excellent air-to-air training, my instructor decided to do one last engagement out in the area. When we checked our fuel, he had more gas than I did, and I had about 370 pounds. Our squadron SOP said "on. deck with 350 pounds or a low-fuel light," which came on around 350 pounds.

We entered the initial for runway 07 at Boca Chica Field. Tower had cleared us to the initial many miles back, and I was feeling confident in my knowledge of the course rules. We had flown around the southern end of the island from the west to avoid the busy terminal area of Key West International.

I reported the initial to tower. They replied, "Enter the initial to runway thirty-one"

"Whoa," I thought. "I must have made a mistake, but I could swear that I had been cleared for runway seven." My helmet promptly caught fire. I confirmed that tower wanted us to use runway 31, even though we were at the initial for runway 7, 1 started a right turn. My lead, who was on the right side, took the lead. The situation was now out of my hands: lead could deal with it. I would just nuzzle back into cruise and follow him. We found out later that they had originally cleared us to runway 7 but had changed the runway without telling us. But it didn't matter-I was flying wing now.

We reported the initial for runway 31 and turned early, directly toward the field. My lead must have felt low on gas, too, a good sign. I crossed under to the right, ready for a left break. My lead was a gung-ho Marine Harrier pilot and liked to enter the break as fast as possible. We were moving! The last speed I saw in the HUD was 425. Then, to make things interesting and re-ignite my helmet fire, tower told us they required a right break from us. We were seconds from the numbers. I saw a quick cross-under signal from the lead and proceeded to cross under. They also told us about a single F-14 that was orbiting the field at 1,200 feet. We had tallied one five miles earlier and had wondered what that aircraft was doing.

Seconds later, lead broke right, and I followed. I now had a low-fuel light and told my lead. He said, "No problem, we'll be on deck in a minute." We flew a normal right-hand pattern (as normal as a right-hand pattern can be flown). At the 90, my lead was waved off for wake turbulence from a C-141 doing a touch-and-go on runway 7. No wonder they didn't want us to land on that runway. I was waved off also.

Then a section of Hornets entered the break for our runway, so we were extended upwind slightly until the second Hornet broke. We followed immediately. I relayed my fuel state to my lead and recommended that he request special handling, so we could get on deck as soon as possible. He told tower that we were minimum fuel and had to land this pass. Tower acknowledged the call. Again, at the 90, my lead was waved off, for no obvious reason. He took it around to the right, without much more than saying his call sign. I was definitely emergency fuel by this time and was determined to land this pass. As you can probably guess, I got waved off.

I told tower that I had emergency fuel and had to land. They told me to take it around for a foul deck. I couldn't believe this was happening to me. Out of the corner of my eye, I saw a white van drive across the approach end of the runway. I took it around the right side and saw my lead turning right in front of me.

I was told to extend when four T-45s entered the break at 800 feet, between me and the F-14, which was still orbiting around at 1,200 feet. Why were all these airplanes converging in the same piece of sky with such minimal separation? It all seemed so unnecessary. I had now lost all faith in the tower's ability to get me on deck safely. After all, I had just come from NAS Kingsville, where the tower takes really good care of you. They were used to dealing with inexperienced aviators, and as a result, I had been shielded from the realities of aviation. Welcome to the real world.

The four Goshawks seemed to drive upwind forever before they started breaking. As the last one broke, I thought, "I'll bet that guy isn't even in the tower's airspace." I turned into him before he was even abeam. I was going to get on deck. I had about 150 pounds of gas. My lead landed, followed by the division, landing one by one until it was my turn. I had gone way long in the groove, just to make sure that the tower didn't wave me off for interval. On deck, I rolled out and taxied back to the det hangar. I had 80 pounds of fuel.

I learned two big lessons that day. First, never assume that just because you are in the landing pattern, you can drop your pack. Emergencies can happen anytime. In my case, I allowed myself to slowly become an emergency by letting the situation get out of hand. Second, the common practice of heading back to the field with the minimum amount of gas may not be that smart.

Lt. Ries is the NAFOPS Officer for VFA-147.





Welcome to the Real World

by Lt. Peter Ries

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Lt. Ries is the NATOPS Officer for VFA-147.



Corner

ORMil

by Lt. Steve Firestone

arly into my nugget cruise, I had a chance to experience something that I had heard about only in flight school: a lightning storm over the Arabian Gulf.

Our flight was supposed to be a routine SSC-MIO mission. After receiving our brief in CIC. we conducted our NATOPS brief. When the subject of the weather came up, we discussed the lightning that we could see off to the east. Our tasking was to work to the west, so we didn't feel the weather would pose a problem.

As we hot-seated the aircraft, the offgoing crew said the lightning shouldn't be a factor since it was well off to the east. We lifted off and were assigned a search area to the southwest. We kept track of the storm and determined it was not moving toward homeplate. The SH-60B doesn't have a weather radar, but it can track moderate to heavy storms. Our tracking, combined with the ship's

weather update, seemed favorable, so we proceeded north on our next assigned mission.

The transit took about 20 minutes, and we stayed on station for another 20 minutes before heading back. The weather looked fine, but we could see, both visually and on the radar, that two storm cells were beginning to move west toward our ship. We decided to proceed back to the ship at max blast to beat the storms. The radar showed two distinct cells advancing quickly. The storms appeared too large to circumnavigate, but we could see a path in between them.

About 10 minutes from the ship, the light show began. Lightning flashed on either side of us and appeared to be closing in. The storms seemed to

ORM Corner

comments or recommendation to Mr. John Mahoney or to Capt ional Risk Management. Mr. Mahoneys address is: Code 08, Naval Safety Center, 375 A St.; Norfolk, VA 23511-4399

Write Capt. Faherty at OPNAV Code N-09K, 2000 Navy Pentagon, Rm. 56-816, Wasgington DC 20350-2000. (703) 614-8430, (DSN-224).



ig the Storm

and what the radar indicated, trying to stay in the middle of those two giant storms. We called the ship, told them our situation, and asked them to set flight quarters so we could land a little early. They managed to get us a green deck just as we rolled final, with lightning still flashing around us.

Once on deck, we let out a collective sigh of relief and debriefed what had just occurred. We agreed that the only thing we could have done was to decide not to fly when we saw the lightning way off to the north. NATOPS says, "Avoid flight through or near thunderstorms," and this is sound advice. But there may come a time when you have no choice, or the storm may form without your knowledge. Good ORM techniques will help you decide whether or not the flight you are preparing for is worth flying.

It always pays to keep track of the weather around the ship. Use whatever assets you have (radar, PIREPS) to stay on top of the weather. If lightning hits your aircraft, NATOPS says to expect to lose all electrical power. Be prepared to bring up utility lights and other emergency lighting at night. Also be prepared for electrical engine controls to kick off. This will require a quick reaction to prevent engine overspeed or overtemp. Consider how the lights are going to affect your night vision.

ORM will help you handle any light shows the weather sends your way.

Lt. Eirestone is the HSL-45, Det. 5 Maintenance Officer.

extend for miles. The HAC decided to bring on the auxiliary power unit in case we lost the main generators. We also established that the pilot at the controls (me at the time) should keep his eyes inside, while the other pilot should scan outside and navigate through the two competing lightning storms. We also discussed turning on the thunderstorm utility lights but decided against it, since we'd be landing soon and would need our night vision for landing.

The awkward silence in the cockpit showed the entire crew was uncomfortable. We quickly went over what could happen and how we would handle each problem. We navigated back, making small corrections based on what we saw outside

Photo-composite by Patricia Eaton

Ice, Vert and a Who

by Capt. Jason Schuette

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With about an hour remaining, Dash 2 developed oil-pressure problems, which made him a bit nervous. However, he decided to press, because the engine rpm was staying within limits.

We had taken off on time, but the winds along the way were not favorable, hard to believe, heading east. Consequently, it was going to get darker than anticipated. Also, although the forecast weather into Cherry Point was VMC, as we got closer, it appeared we would have to penetrate some thick cloud cover to reach VMC. ATIS was calling the field clear. I assumed we were going to press for the overhead, but I didn't say anything.

Then the fun began, It started getting dark. As a division, we had to make an IMC penetration to VMC, and we had a weak jet in the formation. Why not get separate clearances while we were above the clouds VMC? Although not as cool, it would make life easier and control a few risks. "Oh, well." I thought, "we'll see."

As predicted, once we started to descend, the weather became a significant factor. We spent what seemed an eternity in the clouds as Approach vectored us around at 11,000 feet. We were balanced, which put me on the left side of the formation—not the favored position of Prowler pilots. When my section lead's lights began to fade, I figured it was thicker clouds. As I moved closer,

trying to keep sight, I remire discuss it thicker clouds. It was ice on my front windscreent I started moving up and closer to keep my lead on the clear carepy. At that moment, the division turned into me. I remember staring at a whole lot of airplane and wondering what metal on metal would sound like.

The clouds were reported scattered at 9,000 feet and below, yet not once did the lead try to get us into the clear. However, he did begin to see the futility of the situation and decided to split up the formation to land as individuals. We first got rid of our lame bird. Then the rest of us peeled off, still in the goo. The rest of the flight was uneventful, except for my vertigo, which eventually dissipated.

What did I learn from that experience? At many points leading up to my scariest moment, a link in the chain could have been broken. Anyone, myself included, could have recommended splitting up the flight, which, in retrospect, was clearly the preferred method. I could have called "lost sight"

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Prowier photo by Senior Airman Greg L. Davis Photo-composite by Patricia Eaton

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and made a play for the clear air below; that would have been a last-ditch maneuver. Either way, it would have made my situation safer.

Because of the perception that our lead was not one of the best when it came to constructive debriefing, we never discussed this flight, which is another reason why I'm writing this article. It wasn't the first time I had flown into IMC conditions in a division. Without a proper debrief to consider all points of view, the learning points were not discussed, thus paving the way for it to happen again.

OPNAVINST 3710 doesn't prohibit flying divisions into IMC conditions; however, I don't know of any lead who would do such a thing unless it was absolutely necessary for accomplishing a mission. It sure hadn't been during the flight I just described.

I wondered for a long time if this story would be worth revisiting and sending in to Approach. The lesson is simple, but the fact that it happened more than once means it could happen again.

Capt. Schuette flies with VMAO-4.

Jee, Veri and a Whe

by Capt. Jason Schuette

fter more than two years in the mystical fleet, I think the following incident is the scariest one I've ever experienced, and that includes KC-135s at night in IMC conditions.

We were returning as a four-ship from a Yuma, Ariz., detachment. I was Dash last. The first half of the flight was uneventful, given the fact that we were tanking off of a KC-10, and the weather was clear. Our goal was to be overhead Cherry Point, N.C., during daylight to fly the division into the break.

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Capt. Schuette flies with VMAQ-4

Taxiing Our W

by Lt. John Smolen

signed for an airplane for what was to be the simplest of missions: Fly, code aboard, VFR at 1,000 feet, an arduous straight and level flight from point A to point B along the Tyrrhenian Coast near Naples, Italy. It was a beautiful day. We had two qualified aircraft commanders and two qualified crew chiefs aboard for what was

usually a benign, "bread and butter"

executive-transport flight.

Typical obstacles to a seamless flight include lousy weather, impatient VIPs, and language barriers with ATC. I was about to discover another one. And I certainly didn't think I would have the fodder for an *Approach* article so soon in the day.

Prior to shutting down during the second half of the event, we had noted that our tailwheel wasn't locking into place. Our airframers manipulated the tailwheel until it locked. When we started up, we engaged the head and proceeded onward into the taxi checklist. I signaled the plane captain to remove chocks and landing gear pins, looked down to the checklist, looked up again, and saw a thumbs up.

That's what I thought I had seen, anyway. It turned out that the plane captain had been giving a signal for a stuck pin, starboard side. To give this signal, he grasped his index and middle finger on one hand with the other. His signal was correct, but his thumb was absently sticking up—the false thumbs up that I thought I saw. Thinking all was proceeding according to plan, I cleared my side (port side), seeing one aircrewman with chocks over his shoulder and a "remove before flight" flag flapping from one of the pins in his hand.

Continuing the checklist, I told my copilot to unlock the tailwheel, wait for our crew to climb aboard, and call ready for taxi. She had recog-

ay Into Approach

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nized the stuck-pin signal from the plane captain and had released the parking brake (an H-3 trick for unsticking a stuck pin) and had also complied with my call for unlocking the aircraft tailwheel.

Here's where disaster loomed. The crew chief was underneath the starboard sponson, trying to unseat the landing-gear pin, when my copilot released the brakes. The aircraft began to taxi about the chocked right mainmount, because of the inertia in the head. I noticed we were pivoting right, glanced at the confused plane captain, and promptly asked my copilot to apply the brakes. She was a step ahead of me. It wasn't the best time to note that the brake was "mushy," and it took a few extra fractions of a second to build enough pressure on that brake to stop the aircraft. The crew-

man on the starboard side had gotten clear when he noticed the aircraft moving. The helicopter had rotated about 10 to 15 degrees

to the right and up onto the chocks that were still inserted on the starboard side.

We chocked the port side and gathered the crew on ICS to talk about what had happened. On the recommendation of another senior aircrewman present for the launch, I signaled for a lift to lighten the pressure on the starboard side chock. That way, the ground crew could work it free, instead of having to forcibly remove the chock with the full weight of the aircraft on it. After the chock was removed, we regrouped and gathered our senses. Then, with the aircraft chocked, pinned, and tailwheel locked, we started over on the taxi checklist and eventually completed the mission.

At the end of the day, we gathered the entire launch crew and aircraft crew to collect all the perspectives on what had happened during those few moments of a botched taxi. We discovered a few things and drew a few conclusions.

Some of the ground crew thought that when the plane captain signals to unlock the tailwheel, it doesn't actually unlock until the aircraft starts taxiing. This misconception is what gave the crewman under the right sponson a sense of security while freeing the stuck pin. In actuality, the tailwheel is unlocked as soon as the pilot activates the handle in the cockpit, so the pilot in the right seat will have full control of the aircraft and won't need to swap controls to unlock the tailwheel.

The plane captain hadn't immediately responded when he noticed something out of the ordinary. He should have used standard NATOPS hand signals and immediately taken control of the situation. From his perspective, he hadn't given a

"chocks and pins removed" thumbs up, so it took a little while to figure out that the pilots had recognized it as such. These critical

fractions of a second accounted for the 10 to 15 degrees of pivot and a right mainmount balancing on top of a chock.

The most important lesson was for me. Just a few more words with the copilot would have prevented this situation. Despite having thought I'd seen a "thumbs up," I hadn't asked her if she could see her crewman with the chock prior to directing that the tailwheel be unlocked.

After our meeting, I reflected on the breakdown in ACT among our crew and the launch crew. We had witnessed an instantaneous and critical lapse in communication, situational awareness, and, most importantly, leadership (on my part, as the aircraft commander). ACT applies anytime you work with other people toward a common goal. Our goal as a launch crew and aircrew was to taxi safely. We almost didn't.

Lt. Smolen flies with HC-2

Plenty of Skippe Not Much Fuel

by Lt. Chris Churchill

was scheduled for the second event of the day: a trip to the carrier to pick up our ship's CO and the CO of a CG and return them to their respective ships. The crew that dropped them off in the morning told us we wouldn't be able to refuel aboard the carrier when we arrived that afternoon. I thought that was strange, but since we were dealing with ships' COs, I figured the ships would stay close enough to the carrier.

During the preflight brief in CIC, the fact that we couldn't refuel aboard the carrier was reiterated over Navy Red. I asked, "How far away is the carrier, and where is it headed?"

"Sir, the carrier is fifty miles away, and we're headed toward each other."

The CG, which was our first stop after the carrier, was keeping station five miles from our ship. Everything sounded good to me, so I got the card of the day and went to the hangar to brief the crew.

During our briefing, we discussed bingo fuel and the squadron SOP that limited ship-to-ship distances to 80 miles. The VIP kits were installed. and we were ready for our flight. We spun up and asked for pigeons to the carrier. Combat responded that the carrier was 65 miles away. A warning went off in my head.

1+50 Fuel—We took off from our ship and began to climb so we'd be able to contact Strike as soon as possible. As we flew, the HAC conducted training by asking me questions and evaluating contingency plans.

1+30 Fuel—We finally got a TACAN lock with the carrier at 50 miles. We checked our ship's TACAN and determined that the ships were actually 70 miles apart. At 140 knots, we'd be at the carrier in less than 25 minutes. If the ships stayed this far apart, our bingo fuel was 0+40.

1+15 Fuel—Within 10 miles of the carrier, we were told to enter Port Delta. The air boss reiterated the unavailability of fuel. The carrier was facing us as we approached, indicating that they were closing the distance with our ship. As we entered Port Delta, the carrier began to turn to obtain the best winds for a recovery cycle. Reassessing our bingo fuel, we decided that if we weren't off the deck of the carrier with at least 50 minutes of fuel, we'd have to ask the boss for fuel anyway. The boss proved how quickly he wanted us on and off his deck by telling us to hold close aboard the ship, inside the downwind leg of the fixed-wing landing pattern. We held and waited as the jets landed.

1+05 Fuel—Cleared to land, we landed on Spot 3. As we waited for the COs, I called Strike for pigeons to the CG and to mother.

0+55 Fuel—Still no sight of the COs and no updated pigeons from Strike.

0+52 Fuel—The COs got on board. In addition to the two original captains, we had to take a destroyer captain back to his ship. We got an immediate green deck from the air boss and departed on the reciprocal course from which we came.

0+48 Fuel—Strike finally gave us pigeons to our ship. We were 75 miles from the carrier, and it would take about 38 minutes to get to our ship. We decided that if we didn't get a TACAN lock on our ship or the CG by 35 miles away from the carrier, we would turn back. To add to our stress, our ship's CO stayed on ICS and listened to all of our discussions.

0+35 Fuel—We finally got in touch with our ship at 30 miles out from the carrier and 45 miles from our ship. During the 12 minutes prior, I tried to contact the CG, while the HAC tried our ship.

The HAC asked our ship to set flight quarters, so we could land there for fuel if we had to. He also asked them to contact the CG on Navy Red and tell them to monitor their land-launch frequency. Finally, he asked them their course and speed. They replied they were headed away from us but only at five knots. He told them not to go any faster, since we had their CO, and we were going to be tight on fuel.

0+30 Fuel—The CG finally answered us on their land-launch. We asked them for an immediate green deck and fuel as soon as we landed. For the first time during the flight, a warm and fuzzy feeling was possible. We were 35 miles away and would have a green deck at our ship if necessary. The CG was only five miles from our ship, so we would most likely make it there without having to leapfrog.

0+15 Fuel—We passed our ship, and the CG gave us a green deck, so we continued on.

0+12 Fuel—We landed on the CG and offloaded the passengers. After the flight, we debriefed the things we had done right and wrong. First, we felt we should have been more vocal with the people in CIC about closing the distance between our ships and the carrier. After all, we were going to be picking up the COs of all three ships that were ultimately going to be together. During the brief, we could have found out if the ship conducting plane-guard duty would have been available to give us fuel. The burden of carrying three COs also added to a dangerous feeling that we had to get the job done.

Overall, we felt our crew had done everything in our power to adapt as conditions changed. We continued throughout the flight to reassess our situation and make contingency plans. Though we were pushed to our limits throughout, we never painted ourselves into a corner and always had a way out. I left the flight feeling that I had learned more about being an aircraft commander than in any other flight.

Lt. Churchill flies with HC-11, Det. 2, and recently oployed unboard USS Canden.

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As I rolled wings level on the horizon, I glanced at my gyro, which was also tumbling.

What if the GPS was off? GPS is only a supplement to navigation, and while accurate, not legal. What if the standby gyro failed?

Fortunately, we had three pilots and two NFOs onboard, so we were able to bring everybody into the flight station and work through the problem. We delegated who was flying, who had the extra set of eyes backing up the pilot at the controls, who was navigating and communicating, and who was troubleshooting. The NFOs continued that both inertials had dumped. Fortunately, they were expects on the inertials and were able to realism them in flight. We had callable heading information in about five minutes, and my gyros were back online in 15 minutes. Once again, I reflected, life couldn't be better.

What seemed to be statistically impossible had occurred on this flight. Fortunately, we were

VMC, the gyros tumbled drimatically enough to catch our attention (instead of locking at 10 degrees wing down), and we had a GPS with extra aircrew onboard. The real learning points come from considering what could have happened it one or all of these factors had been different.

The most important aspect of this incident was the aircrew coordination during post-flight. ACT doesn't end when the chocks are in place. We reported the incident to maintenance, safety and all pilots. This aircraft for the next two months had a history of both inertials dumping in thight with no apparent trends, and every crew was able to handle their maltunction because of our discussions. It took multiple aircrews and numerous maintenance man hours to track down the problem to a single bad wite from the original aircrame modification that incorporated the inertials. Until the problem was solved, the aircraft was restricted to day VMC flights.

Lt. Tallant flies with 42-16.

P.S. photo by PH3 Darwin Colligado — Photo-composite by Pat Eaton

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by Lt. Shane Tallant

reflight went without a hitch. Apart from the usual summer buildups, the weather was beautiful at flight level 240. The aircrew was jovial and enjoying a Friday afternoon airways-and-instrument-training flight for a weekend RO2N. We even had a midshipman onboard whom I gladly let fly the mighty Orion in the left seat, while I supervised from the right. He was going to return to school with a new appreciation for naval aviation. Life couldn't be better.

As we flew over a VORTAC somewhere in Kentucky, our future aviator made a 60-degree heading change. He hadn't quite mastered how to maintain altitude while turning, so we both felt a little negative G as the aircraft dropped about 75 feet. Nothing out of the ordinary, and the aircraft was already correcting. The midshipman commented, "Something doesn't look right over here." I glanced over, and his attitude gyro was tumbling. I took control of the aircraft and directed him to switch to his standby gyro.

As I rolled wings level on the horizon, I glanced at my gyro, which was also tumbling. "That doesn't make any sense," I thought. The pilot and copilot attitude indicators receive inputs from two independent inertials and two independent power sources. As I switched over to standby gyro, it was time for our future naval aviator to get out of the seat and for a qualified one to get in. I started to think that life could be a little better, after

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Lt. Tallant flies with VP-16

P-3 photo by PH3 Danvin Coligado Photo-composite by Pat Eaton

No, I Didn't Say

by Lt. Matt Niedzwiecki

lying H-46s on Guam has plenty of advantages. For one thing, you get lots of SAR. The island, 30 miles long and 8 miles wide, is a tropical paradise, located along the Marianas Trench in the western Pacific. It is a major vacation spot for people from Japan and other Asia-Pacific countries. Unfortunately, tourists do not understand the dangers associated with the waters surrounding the island. The strong currents and dangerous reefs kill people every year.

As the only airborne asset on Guam, HC-5 is tasked to assist the Coast Guard in SAR operations. Our squadron has a designated SAR crew 24 hours a day, seven days a week. Traditionally, during a three-year tour, pilots will execute numerous searches and rescue at least one person.

Once, when I was on the designated SAR crew, Operations had assigned us a two-hour, day, NATOPS familiarization flight. We practiced a benign SAR scenario and multiple emergencies. After hot-seating out of the aircraft, my crew was walking through maintenance when the Coast Guard called. The initial report was that two Marine Corps safety boats had overturned near the reefs just over the cliffs from our squadron, and five personnel were unaccounted for.

Our crew ran to the still-turning aircraft and hot-seated back in. Another of our squadron aircraft was arriving on scene and commencing the search. We held a quick SAR brief for the crew to bring everyone up to speed and quickly departed over the cliff. We were on scene within minutes.

We talked to our counterparts in the other helicopter. They had spotted the two overturned boats, with five personnel clinging to them, dangerously close to the breakwater. The two boats were about 200 yards apart. Both helos moved in for the rescues.

We dropped our SAR swimmer next to one boat. Within five minutes, we repositioned the

aircraft for the first pickup. The first Marine had a head contusion with some minor bleeding. The remaining Marines were uninjured; we hoisted them into the aircraft. All that remained was to retrieve the SAR swimmer.

I felt great about getting my first rescue. All that was left was to finish hoisting the swimmer and make a beeline for the naval hospital. With the swimmer just 10 feet below the door, the transmission chip light on the master caution panel illuminated. Time seemed to stop for a second. An ICS call warning the crew of the light resulted in multiple "Did you say 'simulated'?" responses. A quick "No!" set the wheels in motion. With no initial secondaries, the pilot at the controls began a slow climb to get over the cliff and return to Andersen AFB. The swimmer was quickly hauled inside, and the Marines on board could only think, "This just isn't my day."

The aircraft was safe on deck within minutes of declaring the emergency, and all the Marines kissed the ground before they climbed into the awaiting ambulances.

After sitting in the quiet aircraft for a minute. one of the crewman said, "Sir, I'm glad we had practiced the imminent transmission failure on our fam flight earlier today." I couldn't have agreed

I'm sure that my crew could have safely returned the aircraft during any emergency procedure, but the confidence that is gained from practicing simulated emergencies is more valuable than just memorizing emergency procedures. Creating operational scenarios inside the aircraft is beneficial for old and new pilots alike.

Although we didn't see any secondaries during the emergency, the chip light had done its duty. Maintainers found numerous metal particles in the aft transmission, which they removed.

Lt. Niedzwiecki flies with HC-5

"Simulated"

With the swimmer just 10 feet below the door, the transmission chip light on the master caution panel illuminated.

PH2 (NAC) Rex Cordell

lere I am in Wardroom I, pointing at my watch, replaying to my buds how I was saddled in on a foe from a sister squadron, gunning him while he feverishly tried to escape my deadly gun solution. With my ill-equipped opponent nowhere in sight, I conveniently leave out the part about him wagging his wings to indicate he was NORDO. Then the growing noise of a cat shot makes everyone stop talking for a moment. I suddenly realize that my tale of bravery and heroism has made me late for CATCC

As I dash through the O-3 passageway, I time myself to see if I can beat my record. Nope—30 seconds flat, three seconds off my best. If that airman hadn't been waxing the floor. I could have made it.

I casually open the door, hoping that CAG isn't present, and if he is, that it is so dark he can't see my face or my squadron patch. Zero for two on that one. I calmly take a seat in the corner when I hear the call, "Tomcat rep." Ahhh, no answer, and no rep in sight. The heat is quickly off me. As I settle in my seat, I realize I do not have the CATCC squadron book. Oh well, no matter. The CATCC

board already has the lineup, and we have a full NATOPS under one of the chairs. I'm set.

"Hornet rep." Darn, my turn on the hot seat. I hustle to the radio. It's one of our new guys, asking if the lack of squelch is a downing discrepancy. Old salt that I am, I set him straight. Every one of our aircraft makes it off the deck. Now comes the hard part: the recovery.

The pilot in our squadron's first aircraft makes his ball call and lands with a pass almost as good as mine usually are. Another new guy. He forgets to turn off his lights in the landing area, a point that the CATCC Officer feels he must point out to me. Master of the obvious. I guess he feels the pilot still needs n talking to from me after suffering the humiliation of the Air Boss screaming at him three times for his lights, with the entire ship listening on the PLAT. I act like I'm writing down all the pertinent facts in my CATCC book, which I forgot to bring, and then return to bad-mouthing the next pass.

Next guy down the chute bolters. LSOs come back with their standard statement, "Five-Zero-One, paddles, make sure you fly the ball." A newly discovered technique!

lies

Maybe I'll try it. (Actually, the guy just has not learned yet to spot the deck correctly.)

At eight miles on final, one of our guys tells the controllers that he does not have three down and locked. Bluewater ops, with a not-too-far divert, but he's low on gas. I look for our large NATOPS, which is in the last chair I look under, grab the radio and start yapping away. Fortunately for me, there is another squadron Hornet rep there, the "dead" guy I gunned on my earlier flight. No wonder he was not at dinner. He looks up the bingo numbers, clean and dirty, and helps me to the landing-gear section of the NATOPS, while I try to act cool and calm on the radio.

How much gas does he have? What is the bingo? Will it be a dirty bingo? Has he checked the light bulbs yet? What if he is below bingo? Dirty tank him? What if we still can't get the gear down? I start reading the procedures to him, not realizing that he is now about three miles on final, dealing with the controllers, and, by the way, flying the aircraft. He waves off low, climbs out, and then hears my lovely voice again yapping about procedures.

Conveniently, my skipper has made his way down to CATCC and joined into the chorus with CAG, the CATCC

Officer and other assorted hecklers, asking me 30 different questions in each ear, while I'm still trying to get at least halfway through the procedures before my bud flames out. Because of my vast experience and expert communication techniques, I still manage that low calm voice on the radio. (Hey, why write an article if you can't exaggerate a little?)

We go through the procedures, and we still can't get three down and locked. He is hitting dirty bingo. We think we can vector another aircraft over to take a look, but it is too far away. We can buy time by trying to dirty tank, barricade him, or divert. We opt for the latter and hope the gear problem is just a bad proximity switch.

Story over? Nope. We continually bug the pilot for extraneous information, while he deals with controllers on one radio and us on another. CAG wants a play-by-play, including direct comms with the divert-field tower. Where is CNN when you need it?

Then a five-minute gap as he makes his final approach into the divert field. Hmm. Sure hope the weather is good, because he doesn't have the gas to be shooting long, involved approaches. Should checked that. We get the news that his gear held up on landing, and a big sigh of relief swells through CATCC. Then all of the second-guessing and lessons relearned for the hundredth time come out.

Get to CATCC or PriFly early, and know who is landing, what configuration they have, and double-check the CATCC board.

Check your divert field: bearing, distance, bingo and weather. When was the weather last updated?

Go through situations that require time-critical actions. Review the procedures: gear won't come down, hydraulic failures, single-engine, etc.

Review, in your ready rooms, situations you've had in the past and the mistakes that people made.

Emphasize to everyone that the CATCC reps need help, not a ton of people asking questions in both ears.

Realize that the pilot is probably overtasked and give him time to fly the aircraft when you are reading procedures to him.

Finally, and most importantly, when you write an Approach article, explain that you have compiled it out of lots of different events, and that you have embellished the facts, so the new skipper doesn't question you about the

CAP Well ales with VIA 98

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I Cdr Weir flies with VFA-86







Re: "Three Clear-Deck Landings in One" (July '00)

Washington, D.C.—Just finished ravaging the July 2000 issue. I'm currently in a small, mainly civilian office in D.C., chomping at the bit to get back in a cockpit. One story ("Three Clear-Deck Landings in One") jumped out for a couple reasons. First, it was written by an HSL-51 Warlord and former squadronmate. And second, the article begged for further commentary on how one might prepare for such an aircraft system casualty.

The article describes an SH-60B that lost its Automatic Flight Control System (AFCS) halfway into a mission. Of course, this occurred at night, in the goo, with a junior crew, off the back of a smallboy, with no land or large-deck available. In other words, typical Light Airborne Multi-Purpose System (LAMPS) Mk-III ops.

For the uninitiated, when the AFCS on an SH-60B is up and sweet (which is 99.9 percent of the time), flying the Seahawk is like driving a Cadillac with a highly tuned cruise control and an "On Star" button: Your 93-year-old grandma could fly it. On the other hand, during that .1 percent of the time when you lose AFCS, flying the SH-60B is like trying to balance on a greased beach ball in the middle of an ice-skating rink.

The crew in the article did a great job getting a broken aircraft safely back to mother. Good headwork and crew coordination saved a situation that easily could have turned disastrous within a second or two. What could they have done to prepare for such a scenario? How about doing several of their annually required instrument approaches (while in the relatively benign environment of the home-field instrument pattern) with the AFCS off? I'm not sure what instructor or OinC in my fledgling LAMPS days nudged me into this habit, but I've been doing it for several years now. It is an excellent way to keep my instrument scan tuned

and instrument air work smooth and accurate. Properly briefed, it's a safe, efficient way of preparing for no AFCS on that dark night, in the goo, off the boat, with no other landing options available.

Cdr. Dave Tiller **Operations Research Analyst** Aircraft Division Naval Center for Cost Analysis

HTML versus PDF

Regarding your request for feedback on HTML versus PDF versions on the web: I prefer PDF. I can download for future reading and can read the entire magazine without calling up each article separately.

By the way, I am a retired Air Force chief master sergeant (E-9) and ex-maintenance superintendent who has enjoyed reading Approach (when I could get a copy) for many years. Even though you naval aviators occasionally take a swipe at those of us in the "baby" service, I have learned and applied many II lesson on the care and feeding of fighters and fighter pilots.

David Hon **EDNA Technical Support Specialist** (USAF F-16 Program) Lockheed Martin Aeronautics

Other readers prefer HTML, because it is quicker to download, easier to cut-and-paste, and lends itself to word searches. We will continue to put both versions on our site.—Ed.



Movielingus has also been known to rear its ugly head on base frequencies during AIC hops when the skipper's not flying. .

Don't leave me. Maverick!

You never close your eyes anymore when I kiss your lips.

Jester's dead!

Get your butts above the hard deck and return to base immediately!

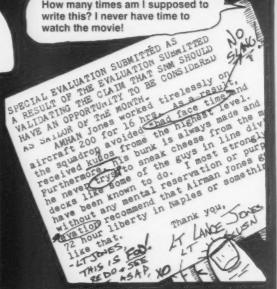
Although the diagnosis is easy, the cure is not, especially while the patient is still deployed. Extreme measures have been attempted with little or no success...

You've got to help me, man! They took my VCR and won't let me in the ready room during the flick. I'm forgetting all of my best lines! Sure, you can watch in our stateroom, but it'll cost you. Fill this jug with bug juice and this helmet bag with popcorn.



Fortunately, a method suggested by a congressional advisory committee has been implemented: the administration of seemingly useless paperwork! So the next time you complain about it, be thankful that your superiors care about your health.

> How many times am I supposed to write this? I never have time to



Ward Carroll's first novel, Punk's War, is being published this spring. He drew this cartoon when he was a lieutenant in VT-86. It originally appeared in Approach in September 1988.



"The kind real aviators like"

Ward Carroll

Medical Forum

One of the greatest problems facing flight surgeons today is "movielingus." This disease is akin to brainwashing except it is consciously self-induced by watching the same movie a number of times. It is most commonly found around deployed squadrons and tends to favor aviators at or below the rank of lieutenant.







The disease, also known as "film speak," comes in two forms: mono film speak. . .

... There will be no money, but on your death bed you will receive total consciousness, so I've got that going for me, which is nice...

Or group film speak, where the dialogue requires more than one character. . .

What kind of fraternity would pledge a . . . man like you?

It's a Delta pin, Sir.



This, obviously, is the more dangerous strain, as it can infest entire ready rooms if performing scenes which require thirty or more people, such as Cecil B. Demille stuff.

